# ANNUAL INDEX

## Volume 8, September 1970 — May 1971

#### **AUTHOR INDEX**

Abercrombie, Edward A. "Space Panel." November 70:10

Andrews, Edwin S. Study for a Starry Night. March 71:25

Armstrong, Charles E. Shoot Out at Claypit Hill, Or, The Rubber Band Unit. April 71:30

Baldwin, Eugene F. USDA Science Study Aids. September 70:17 Balzer, LeVon and Jal S. Parakh. Pre-

Service Miniteaching. April 71:25 Barr, Bonnie. Disaster Is the Name of the Game. November 70:24

Bonwill, Allan and Ellen. (Science and Teachers) April 71:4

Boyer, Robert E. and David P. Butts. Capturing Excitement: Oceanography. March 71:14

Brandwein, Paul F. On the Easy Satisfactions of the Easy Critics. (Editorial) March 71:9

Brovey, Daniel J. and Warren E. Yasso. Earth Science Experiences: Expanding the Child's Awareness of His Natural Physical Environment, October 70:30

Brown, Lynn and Rochelle Hartz Pennell. Coordinated Teaching in Orbit. November 70:7

Bruce, Larry R. Let's Increase Learning Efficiency. January/February 71:34 Butts, David P. Nature's Protest. (Edi-

torial) January/February 71:6 Butts, David P. and Robert E. Boyer. Capturing Excitement: Oceanography. March 71:14

Bybee, Rodger and Alan McCormack. Applying Piaget's Theory. December

Campbell, M. D. (Science and Teachers)

Chittenden, Edward A. Piaget and Elementary Science. December 70:9 Christenson, Hazel. Pond Water Jungle. March 71:30

Cohen, Michael R. Developing a Teacher's Awareness of Children. January/ February 71:24

Coulter, John C. (Science and Teachers) March 71:6

Cowan, Paul J. and Clifford A. Hardy. Environmental Education and the Elementary School. May 71:16

Davis, Dianne. (Science and Teachers) March 71:6

Davis, Janice H. Our Block of Earth. January/February 71:22 Davis, Louis, Mrs. (Letters) September

70:5

Dayton, Donald A. (Letters) September 70:5

Demkovitch, Joan and Allan K. Kondo. Science Is a Great Big Question Mark. November 70:14

De Vito, Alfred. "X, Why, and Thee."

October 70:24 DeWaard, John E. (Letters) January/ February 71:2

Festerling, Bob. (Science and Teachers) April 71:4

Fiorello, Anthony. The Flying Machine. September 70:18

Fisher, Helen T. (Science and Teachers) December 70:7

Gallo, Nadine, Gerald T. Greaney, and George F. Smith. Implementation Model for a Science Program. May 71:3

Galston, Fran. (Science and Teachers) November 70:6

Garrett, Alfred B. (Editorial) October 70:7

Gary, Henry and Donald Peck. A Day of Oceanography. March 71:11 Goldsmith, Robert H. Dynamic Atomic

Model, The. May 71:15 Goldwater, Barry. (Letters) September

Good, Ronald G. When Is a Problem a Problem? May 71:18

Goodlad, John I. The Reconstruction of Schooling. (Editorial) December 70:4 Goodwin, Lilla M. (Letters) October

Greaney, Gerald T., Nadine Gallo and George F. Smith. Implementation Model for a Science Program. May

Grignon, Philip G. In Search of Whales. April 71:14

Hardy, Clifford A. and Paul J. Cowan. Environmental Education and the Elementary School. May 71:16

Hulstrunk, Al. (Letters) March 71:4 Iona, Mario. (Letters) October 70:10; January/February 71:4
Johnson, G. Leonard. Shoreline Features

of Our National Parks. March 71:18 King, John M. (Letters) December 70:3 Knapp, Clifford E. Conducting a Field Trip, Organizational Patterns for Instruction. September 70:26

Kondo, Allan K. and Joan Demkovitch.. Science Is a Great Big Question Mark. November 70:14

Konicek, Richard D. For Less Than a Nickel. April 71:19

Labinowich, Ed. A Closer Look at Environmental Education, March 71:31 Lener, Walter. (Letters) October 70:10 Light, Kenneth F. (Letters) September 70:5

Lindauer, Ivo E. (Letters) March 71:2 Masteller, E. C. and Margaret N. Uhleman. When to Call a Bug a Bug. November 70:11

McAnarney, Harry. Magnetic Induction. October 70:19

McCormack, Alan and Rodger Bybee. Applying Piaget's Theory. December

McGlathery, Glenn. How Is Your Moon Geography? April 71:6

McGlathery, Glenn. Tic-Tac-Toe Graph: An Elementary Graphing Game. November 70:19

McGovern, George. (Letters) September 70:6

Moreton, Ann. Spiders. September 70:7 Muente, Grace. (Science and Teachers) November 70:6

Munson, Howard. (Science and Teachers) September 70:4

Nixon, Richard M. (Letters) September Oberlin, Lynn. (Letters) January/Febru-

ary 71:4 Pampe, William R. Lightning. October

70:14 Parakh, Jal S. and LeVon Balzer. Pre-Service Miniteaching. April 71:25 Peck, Donald and Henry Gary, A Day

of Oceanography. March 71:11 Pennell, Rochelle Hartz and Lynn Brown.

Coordinated Teaching in Orbit. November 70:7

Philips, Ronald J. Technology Education and Progress. April 71:11 Picone, Sister Frances. (Science and Teachers) March 71:6

Quander, Doris D. Snowflakes-An Introduction to Symmetry, December 70:22

Rainsbury, Ron. Sailing Along in Science. May 71:8

Reed, George (Science and Teachers) October 70:8 Rosenau, Fred S. Decisions, Decisions.

October 70:17 Rosenbaum, Henry. (Science and Teachers) October 70:8

Rosner, Hy and Joan Rosner. Live and Learn. September 70:24

Rosner, Joan and Hy Rosner. Live and Learn. September 70:24

Schmidt, Donald J. The Long White Lab Coat and Other Misconceptions. April

Shattuck, J. Bruce. Value Clarification from Science Teaching. April 71:16 Sherman, Jack. A Science Opener. March 71:28

Shugrue, Sylvia K. An January/February 71:21 An Urban ESA.

Simon, Linda. Ecology—A Classroom Bibliography. March 71:37 Smith, George F., Gerald T. Greaney, and Nadine Gallo. Implementation Model for a Science Program. May 71:3

Sokol, Louis F. (Letters) December 70:3

# ANNUAL INDEX

## Volume 8, September 1970 — May 1971

#### **AUTHOR INDEX**

Abercrombie, Edward A. "Space Panel." November 70:10

Andrews, Edwin S. Study for a Starry Night. March 71:25

Armstrong, Charles E. Shoot Out at Claypit Hill, Or, The Rubber Band Unit. April 71:30

Baldwin, Eugene F. USDA Science Study Aids. September 70:17 Balzer, LeVon and Jal S. Parakh. Pre-

Service Miniteaching. April 71:25 Barr, Bonnie. Disaster Is the Name of the Game. November 70:24

Bonwill, Allan and Ellen. (Science and Teachers) April 71:4

Boyer, Robert E. and David P. Butts. Capturing Excitement: Oceanography. March 71:14

Brandwein, Paul F. On the Easy Satisfactions of the Easy Critics. (Editorial) March 71:9

Brovey, Daniel J. and Warren E. Yasso. Earth Science Experiences: Expanding the Child's Awareness of His Natural Physical Environment, October 70:30

Brown, Lynn and Rochelle Hartz Pennell. Coordinated Teaching in Orbit. November 70:7

Bruce, Larry R. Let's Increase Learning Efficiency. January/February 71:34 Butts, David P. Nature's Protest. (Edi-

torial) January/February 71:6 Butts, David P. and Robert E. Boyer. Capturing Excitement: Oceanography. March 71:14

Bybee, Rodger and Alan McCormack. Applying Piaget's Theory. December

Campbell, M. D. (Science and Teachers)

Chittenden, Edward A. Piaget and Elementary Science. December 70:9 Christenson, Hazel. Pond Water Jungle. March 71:30

Cohen, Michael R. Developing a Teacher's Awareness of Children. January/ February 71:24

Coulter, John C. (Science and Teachers) March 71:6

Cowan, Paul J. and Clifford A. Hardy. Environmental Education and the Elementary School. May 71:16

Davis, Dianne. (Science and Teachers) March 71:6

Davis, Janice H. Our Block of Earth. January/February 71:22 Davis, Louis, Mrs. (Letters) September

70:5

Dayton, Donald A. (Letters) September 70:5

Demkovitch, Joan and Allan K. Kondo. Science Is a Great Big Question Mark. November 70:14

De Vito, Alfred. "X, Why, and Thee."

October 70:24 DeWaard, John E. (Letters) January/ February 71:2

Festerling, Bob. (Science and Teachers) April 71:4

Fiorello, Anthony. The Flying Machine. September 70:18

Fisher, Helen T. (Science and Teachers) December 70:7

Gallo, Nadine, Gerald T. Greaney, and George F. Smith. Implementation Model for a Science Program. May 71:3

Galston, Fran. (Science and Teachers) November 70:6

Garrett, Alfred B. (Editorial) October 70:7

Gary, Henry and Donald Peck. A Day of Oceanography. March 71:11 Goldsmith, Robert H. Dynamic Atomic

Model, The. May 71:15 Goldwater, Barry. (Letters) September

Good, Ronald G. When Is a Problem a Problem? May 71:18

Goodlad, John I. The Reconstruction of Schooling. (Editorial) December 70:4 Goodwin, Lilla M. (Letters) October

Greaney, Gerald T., Nadine Gallo and George F. Smith. Implementation Model for a Science Program. May

Grignon, Philip G. In Search of Whales. April 71:14

Hardy, Clifford A. and Paul J. Cowan. Environmental Education and the Elementary School. May 71:16

Hulstrunk, Al. (Letters) March 71:4 Iona, Mario. (Letters) October 70:10; January/February 71:4
Johnson, G. Leonard. Shoreline Features

of Our National Parks. March 71:18 King, John M. (Letters) December 70:3 Knapp, Clifford E. Conducting a Field Trip, Organizational Patterns for Instruction. September 70:26

Kondo, Allan K. and Joan Demkovitch.. Science Is a Great Big Question Mark. November 70:14

Konicek, Richard D. For Less Than a Nickel. April 71:19

Labinowich, Ed. A Closer Look at Environmental Education, March 71:31 Lener, Walter. (Letters) October 70:10 Light, Kenneth F. (Letters) September 70:5

Lindauer, Ivo E. (Letters) March 71:2 Masteller, E. C. and Margaret N. Uhleman. When to Call a Bug a Bug. November 70:11

McAnarney, Harry. Magnetic Induction. October 70:19

McCormack, Alan and Rodger Bybee. Applying Piaget's Theory. December

McGlathery, Glenn. How Is Your Moon Geography? April 71:6

McGlathery, Glenn. Tic-Tac-Toe Graph: An Elementary Graphing Game. November 70:19

McGovern, George. (Letters) September 70:6

Moreton, Ann. Spiders. September 70:7 Muente, Grace. (Science and Teachers) November 70:6

Munson, Howard. (Science and Teachers) September 70:4

Nixon, Richard M. (Letters) September Oberlin, Lynn. (Letters) January/Febru-

ary 71:4 Pampe, William R. Lightning. October

70:14 Parakh, Jal S. and LeVon Balzer. Pre-Service Miniteaching. April 71:25 Peck, Donald and Henry Gary, A Day

of Oceanography. March 71:11 Pennell, Rochelle Hartz and Lynn Brown.

Coordinated Teaching in Orbit. November 70:7

Philips, Ronald J. Technology Education and Progress. April 71:11 Picone, Sister Frances. (Science and Teachers) March 71:6

Quander, Doris D. Snowflakes-An Introduction to Symmetry, December 70:22

Rainsbury, Ron. Sailing Along in Science. May 71:8

Reed, George (Science and Teachers) October 70:8 Rosenau, Fred S. Decisions, Decisions.

October 70:17 Rosenbaum, Henry. (Science and Teachers) October 70:8

Rosner, Hy and Joan Rosner. Live and Learn. September 70:24

Rosner, Joan and Hy Rosner. Live and Learn. September 70:24

Schmidt, Donald J. The Long White Lab Coat and Other Misconceptions. April

Shattuck, J. Bruce. Value Clarification from Science Teaching. April 71:16 Sherman, Jack. A Science Opener. March 71:28

Shugrue, Sylvia K. An January/February 71:21 An Urban ESA.

Simon, Linda. Ecology—A Classroom Bibliography. March 71:37 Smith, George F., Gerald T. Greaney, and Nadine Gallo. Implementation Model for a Science Program. May 71:3

Sokol, Louis F. (Letters) December 70:3

Steidle, Walter E. The Environmental Education Act. March 71:21 Stern, David P. The Radiometer. No-

vember 70:16

Strong, Richard A. Star Tracker-An Aid for Use in Learning About Time and Space. September 70:11

Swan, Malcolm. (Science and Teachers) September 70:4; November 70:6 Swann, A. Henry. Current Electricity. September 70:32

Swartz, Clifford (Letters) December 70:2 Tafel, Marten. How to Quit Teaching Science. (Editorial) November 70:4 Taylor, Jennifer. "Start with a Pin." Oc-

tober 70:11

Thaw, Richard F. (Letters) January/ February 71:2 Thompson, James B. (Letters) September 70:5

Uhleman, Margaret N. and E. C. Masteller. When to Call a Bug a Bug. November 70:11

Verizzo, Ouida and John D. Woolever. Science Is a Verb. September 70:14 Victor, Robert C. Sky Calendar, January/February 71:32; March 71:23; April 71:21; May 71:20
Voelker, Alan M. Physical and Chemical

Change—Appropriate Concepts for Elementary School? December 70:19 Waltz, Sondra. Insect Cubes. January/

February 71:28 Whitmer, John C. (Science and Teachers) January/February 71:9

Whitmer, John C. Bottle Balances. January/February 71:17

Williams, Evelyn (Science and Teachers)

December 70:7 Wilson, Evelyn H. Urban Education: The Relevant Approach. January/ February 71:11

Wolfe, Deborah Partridge. Preservice Science Education. October 70:27 Woolever, John D. and Ouida Verizzo. Science Is a Verb. September 70:14

Wulfson, Stephen. Better Mouse Trap, A. May 71:14

Yasso, Warren E. and Daniel J. Brovey. Earth Science Experiences: Expanding the Child's Awareness of His Natural Physical Environment. October 70:30

Zeitler, W. R. (Science and Teachers) January/February 71:9

## SUBJECT INDEX

#### Biology

#### (Including Environmental Education)

Better Mouse Trap, A. Stephen Wulfson. May 71:14

Conducting a Field Trip, Organizational Patterns for Instruction. Clifford E. Knapp. September 70:26

Disaster Is the Name of the Game. Bonnie Barr. November 70:24

Ecology—A Classroom Bibliography.
Linda Simon. March 71:37

Environmental Education, A Closer Look

at. Ed Labinowich. March 71:31

Environmental Education Act, The. Walter E. Steidle. March 71:21
Environmental Education and the Ele-

mentary School. Clifford A. Hardy and Paul J. Cowan, May 71:16

Gardens in the Classroom. January/ February 71:16

Insect Cubes. Sondra Waltz. January/ February 71:28

Live and Learn. Joan Rosner and Hy Rosner. September 70:24

Nature Awareness. April 71:24 Our Block of Earth. Janice H. Davis. January/February 71:22

Pond Water Jungle. Hazel Christenson. March 71:30
Search of Whales, In. Philip G. Grignon.

April 71:14

Spiders. Ann Moreton. September 70:7 When to Call a Bug a Bug, E. C. Masteller and Margaret N. Uhleman, November 70:11

Urban Education: The Relevant Approach. Evelyn H. Wilson. January/ February 71:11

Urban ESA, An. Sylvia K. Shugrue. January/February 71:21 Uses of Live Animals. October 70:22

#### **Earth Science**

#### (Meteorology, Geology, Oceanography, Astronomy)

Capturing Excitement: Oceanography. Robert E. Boyer and David P. Butts. March 71:14

Coordinated Teaching in Orbit, Rochelle Hartz Pennell and Lynn Brown. November 70:7

Day of Oceanography, A. Donald Peck and Henry Gary. March 71:11

Earth Science Experiences: Expanding Child's Awareness of His Natural Physical Environment. Warren E. Yasso and Daniel J. Brovey. October 70:30

How Is Your Moon Geography? Glenn McGlathery. April 71:6

How Much Water Per Inch of Snow?

January/February 71:27

Lightning. William R. Pampe. October

Shoreline Features of Our National Parks. G. Leonard Johnson, March 71:18

Sky Calendar. Robert C. Victor. January/February 71:32; March 71:23; April 71:21; May 71:20

Snowflakes-An Introduction to Symmetry. Doris D. Quander, December 70:22; (Letters) March 71:4 "Space Panel." Edward A. Abercrombie.

November 70:10

Star Tracker-An Aid for Use in Learning About Time and Space. Richard A. Strong. September 70:11 Study for a Starry Night. Edwin S. Andrews. March 71:25

#### **NSTA Activities**

Bibliography. December 70:5

Blough to Co-Chair Review Committee. April 71:2

Blough, Glenn. May 71: Cover II Board of Directors Meeting. October 70:2

CESI News. January/February 71:36; April 71:38

College Journal. April 71:2
Entry Materials for TSE. December

European Holiday 1970. October 70:2

Future Scientists of America. October 70:16

New Advisory Board Members Appointed. September 70:2 New Books Published. November 70:3

New Procedure for Ordering NSTA Publications. September 70:2

New Publication on Environmental Programs. October 70:20

NSTA Annual Convention 1971, September 70:2; October 70:21; November 70:21; December 70:25; January/ February 71:37; May 71:11

NSTA Annual Convention 1972. May 71: Cover IV

NSTA Commission Proposes Standards. November 70:2

NSTA Nominations. January/February 71:4; Election Results 1971. May 71:2 NSTA Regional Conferences 1970. September 70:21; NSTA Regional Conferences 1971. April 71:20

NSTA's Twelve Districts. October 70:4; Map Correction. November 70:3

S&C Staff Change. September 70:2 Science Teachers for Overseas Duty Sought. November 70:3

Soight. November 70:3
Spring Institutes Planned Around Several
Topics. November 70:2
STAR '71 and Ohaus-NSTA Awards.
September 70:20
The Science Teacher Wins All-America
Award. November 70:3
UNESCO Conferences May 71:3 UNESCO Conferences. May 71:2 Uses of Live Animals. October 70:22

#### **Physics**

Bottle Balances. John C. Whitmer. January/February 71:17

Current Electricity. A. Henry Swann. September 70:32; (Letters) January/ A. Henry Swann. February 71:4
Flying Machine, The. Anthony Fiorello.

September 70:18

For Less Than a Nickel. Richard D. Konicek. April 71:19 "Laws of Inertia?" (Letters) Mario Iona.

October 70:10

Magnetic Induction. Harry McAnarney. October 70:19 Radiometer, The. David P. Stern. No-

vember 70:16; (Letters) January/February 71:2 Sailing Along in Science. Ron Rainsbury.

May 71:8
Shoot Out at Claypit Hill, Or, The Rub-

ber Band Unit. Charles E. Armstrong. April 71:30 "Start with a Pin." Jennifer Taylor.

October 70:11

Tic-Tac-Toe Graph: An Elementary Graphing Game. Glenn McGlathery. November 70:19

#### Programs, Facilities, and Resources

Ad-vailables. September 70:28; October 70:29; November 70:13; December 70:21; January/February 70:15; March 71:20; April 71:20

71:20; April 71:10; May 71:10 Clearinghouse for Drug Abuse Education Materials. November 70:18

Decisions, Decisions. Fred S. Rosenau. October 70:17

Environmental Education Act, The. Walter E. Steidle. March 71:21

Implementation Model for a Science Program. George F. Smith, Gerald T. Greaney, and Nadine Gallo. May 71:3

XUM

National Elementary Science Curriculum Projects Update. September 70:30; (Letters) December 70:2

Ontario Science Centre Opens. November 70:3

Pre-Service Miniteaching. LeVon Balzer and Jal S. Parakh. April 71:25

Resources Reviews. September 70:34; October 70:34; November 70:26; 70:28; January/February December 70:42; March 71:40; April 71:32; May 71:22

Science Opener, A. Jack Sherman. March 71:28

Education and Progress. Technology Ronald J. Philips. April 71:11 UNESCO Book on Water Resources.

March 71:38

Urban ESA, An. Sylvia K. Shugrue. January/February 71:21 USDA Science Study Aids. Eugene F.

Baldwin. September 70:17

Science Education (Including Philosophy, Methodology, and Behavior of Children)

Conducting a Field Trip, Organizational Patterns for Instruction. Clifford E. Knapp. September 70:26

Environmental Education, A Closer Look at. Ed Labinowich. March 71:31 Dynamic Atomic Model, The. Robert H.

Goldsmith. May 71:15 Environmental Education and the Elementary School. Clifford A, Hardy and Paul J. Cowan. May 71:16

Metric System. September 70:6; December 70:3; March 71:2

Physical and Chemical Change-Appropriate Concepts for Elementary School? Alan M. Voelker. December 70:19
Pre-Service Miniteaching. LeVon Balzer

and Jal S. Parakh. April 71:25

Preservice Science Education. Deborah

Partridge Wolfe, October 70:27 Science Is a Great Big Ouestion Mark. Allan K. Kondo and Joan Demkovitch. November 70:14

Science Is a Verb. John D. Woolever and Ouida Verizzo. September 70:14 Urban Education: The Relevant Approach. Evelyn H. Wilson. January/ February 71:11

When Is a Problem a Problem? Ronald G. Good. May 71:18

"X, Why, and Thee." Alfred De Vito. October 70:24

(Behavior of Children)

Applying Piaget's Theory. Rodger Bybee and Alan McCormack. December 70:14

Developing a Teacher's Awareness of Children, Michael R. Cohen, January/ February 71:24

Let's Increase Learning Efficiency. Larry R. Bruce. January/February 71:34 Long White Lab Coat and Other Mis-

conceptions, The. Donald J. Schmidt. April 71:28 Piaget and Elementary Science. Edward

A. Chittenden. December 70:9 Value Clarification from Science Teaching. J. Bruce Shattuck. April 71:16

AUGUST 5-7, 1971

Department of Elementary-Kindergarten-Nursery Education, Seventh National Study/Action Conference, Hotel Sonesta, Washington, D. C.

JUNE 26-JULY 2, 1971

National Education Association, Convention, Detroit Hilton and Sheraton-Cadillac Hotels and Howard Johnson's Downtown Motel, Detroit, Michigan.

Index of Adventisens

Thomas Y. Crowell Company (Juvenile) 25

Elements (Union Printing Company, Inc.) 24

**Hubbard Scientific Company 23** 

McGraw-Hill, Webster Division 28

NASCO 24

New Tomorrow Scientific Company Cover III



# 56 fascinating reasons to

The final updated list of ELEMENTARY SCIENCE STUDY UNITS . . . Available September 1971 from McGraw-Hill

**Animal Activity** Animals in the Classroom Attribute Games and Problems

**Balloons and Gases** (Aug. 1971) Batteries and Bulbs Batteries and Bulbs II (Aug. 1971)

Behavior of Mealworms Bones Brine Shrimp

**Budding Twigs** Butterflies

Clay Boats **Colored Solutions** Cravfish Daytime Astronomy (Aug. 1971) Drops, Streams, and Containers (Oct. 1971) Earthworms (Aug. 1971) Eggs & Tadpoles Match and Measure

(Aug. 1971) Microgardening Mirror Cards

Changes

Mobiles Mosquitoes (Aug. 1971) **Musical Instruments** 

Recipe Book Mystery Powders **Optics** 

Pattern Blocks Peas and Particles

**Pendulums Pond Water Primary Balancing** 

Printing **Rocks and Charts** 

Senior Balancing **Small Things** 

Sink or Float (Aug. 1971) Gases and "Airs" Geo Blocks

**Growing Seeds Heating and Cooling** 

(Aug. 1971) Ice Cubes

Kitchen Physics Life of Beans and Peas Light and Shadows

Mapping (Aug. 1971) Spinning Tables (Aug. 1971) Starting from Seeds (Aug. 1971)

Stream Tables (Aug. 1971)

Structures **Tangrams** 

Tracks (Aug. 1971) Water Flow (Aug. 1971) Where Is the Moon?

Whistles and Strings (Aug. 1971)

ESS builds from the child's natural curiosity about everything. It is the product of joint efforts by scientists and teachers from every level of education. The activity centered units turn the classroom into a laboratory . . . the child learns to observe, investigate, and record his own conclusions. Equipment ranges from sophisticated microscope to everyday objects.

Write for all the fascinating facts.

### WEBSTER DIVISION McGRAW-HILL BOOK CO.

Manchester Road, Manchester, Mo. 63011.